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A case for space: AFRL takes part in global space event

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HOUSTON — More than 30 years after astronauts took the first steps on the moon, space exploration continues to captivate today's visionaries.

Space policy experts, aerospace engineers, scientists and students from around the world gathered in Houston, Texas, Oct. 10-19 for the World Space Congress, to contemplate and debate the future of space. The global event, held every 10 years, featured 350,000 square feet of exhibits, educational events and more than 200 technical sessions.

The Air Force Research Laboratory was among 309 exhibitors to share current research into the mysteries of space. Six AFRL directorates and the Air Force Office of Scientific Research showcased a cache of projects – from space weather research to high power fiber lasers.

Cecilia Luna, AFRL Directed Energy Directorate, discusses work at the Maui Space Surveillance Complex in Hawaii, using the 3.67-meter telescope surveillance system on display at the World Space Congress at the Brown Convention Center in Houston. (Air Force photo by Rich Garcia, Directed Energy Directorate)

Special AFRL exhibits included a telescope provided by AFOSR to study the sun's magnetic field and a Doppler receiver, which remotely senses the Earth's ionosphere using satellite radio transmissions. The Sensors Directorate set up its F-16 simulator cockpit and offered "flights" through a battlespace generated by the Joint Integrated Mission Model. The cockpit demonstrates the insertion of man-in-the-loop capabilities into a digital synthetic battlespace.

The Space Vehicles Directorate talked about its GeoSpace computer program, used to study the space environment. According to program manager Lt. Col. David Bell, the goal is to move toward forecasting space weather in order to protect satellites. Browsers also gazed through a microscope, set up by Directed Energy, to view a high power fiber laser under study for future tactical weapon platforms, and a 3.67-meter telescope space surveillance system designed to collect space data at the Maui Space Surveillance Complex in Hawaii.

The Air Vehicles Directorate discussed concepts for its Space Operations Vehicle program, which is working to provide aircraft-like levels of operation such as quick turn times, launch on demand and high sortie rates. Also on display was the Propulsion Directorate's scramjet model and the Materials and Manufacturing Directorate's spin casting technology — a lightweight, composite material used to create mirrors on satellite communications equipment.

A conference spokesperson reported that an estimated 20,000 people participated in the combined Congress events held at Houston's George R. Brown Convention Center. Based on the overall collaboration, exchange of information and public outreach, organizers bill the event as a "huge success." **@**